

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-49 (Cancelled)

50. (Previously Presented) A method for synthesizing an array of chemical compounds on the surface of a support, said method comprising:

- (a) contacting a surface of said support with a fluid reagent for synthesizing said chemical compounds,
- (b) mounting said support in a chamber of a flow cell and subjecting said surface to one step of said synthesis and
- (c) mounting said support in a chamber of another flow cell and subjecting said surface to another step of said synthesis wherein (a)-(c) are repeated until said array of chemical compounds is synthesized on said surface and wherein each of said flow cells comprises a housing with a chamber and an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is mounted wherein said support is selected from the group consisting of a strip, a plate or a flat glass.

51. (Previously Presented) A method according to claim 50 further comprising mounting said support after step (c) of said synthesis into a chamber of another flow cell and subjecting said surface to another step of said synthesis.

52. (Previously Presented) A method according to claim 50 wherein said synthesis comprises "n" number of steps including (b) and (C) and said method comprises independently mounting a support into a chamber of one of "n" number of flow cells and subjecting said surface to a different step of said synthesis in each of said flow cells.

53. (Previously Presented) A method according to claim 50 wherein reagents for step (b) of said synthesis are in fluid communication with said flow cell of step (b) and reagents for step (c) of said synthesis are in fluid communication with said flow cell of step (C) and wherein the fluid communication of the flow cell of step (b) is separate from the fluid communication of the flow cell of step (c).

54. (Previously Presented) A method according to claim 50 wherein at least one of said steps of said synthesis comprises washing said surface.

55. (Previously Presented) A method according to claim 50 wherein said chemical compounds are polymers.

56. (Previously Presented) A method according to claim 55 wherein said polymers are biopolymers.

57. (Previously Presented) A method according to claim 50 wherein said flow cells comprise a holder for said support.

58. (Previously Presented) A method according to claim 50 wherein said flow cells comprise at

least one inlet and an outlet.

59. (Previously Presented) A method according to claim 58 wherein a wash solution and a reagent for said synthesis are independently directed to said inlet.

60. (Previously Presented) A method for synthesizing an array of biopolymers on the surface of a support wherein said synthesis comprises a plurality of monomer additions, said method comprising:

- (a) depositing droplets of monomer addition reagents on a surface of said support,
- (b) placing said support into a chamber of a flow cell and subjecting said surface to a step of said synthesis that is subsequent to a monomer addition and
- (c) placing said support into a chamber of another flow cell and subjecting said surface to another step of said synthesis that is subsequent to step (b) wherein said steps are repeated until said array of biopolymers is synthesized on said surface and wherein each of said flow cells comprises a housing with a chamber and an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is placed and wherein said flow cell of (b) is dedicated to said step (b) and said flow cell of (c) is dedicated to step (c).

61. (Previously Presented) A method according to claim 60 wherein one of said steps (b) and (c) comprises a wash.

62. (Previously Presented) A method according to claim 60 wherein said biopolymers are polynucleotides.

63. (Previously Presented) A method according to claim 60 wherein step (b) comprises subjecting said surface to an oxidizing agent.

64. (Previously Presented) A method according to claim 60 wherein step (c) comprises subjecting said surface to an agent for removing a protecting group.

65. (Previously Presented) A method according to claim 60 wherein said flow cells comprise at least one inlet and an outlet and a holder for said support.

66. (Previously Presented) A method according to claim 65 wherein a wash solution and a reagent for said synthesis are independently directed to said inlet.

67. (Previously Presented) A method according to claim 60 wherein said biopolymers are peptides.

68. (Previously Presented) A method according to claim 60 wherein said biopolymers are synthesized on said surface in multiple arrays and said support is subsequently diced into individual arrays of biopolymers on a support.

69. (Previously Presented) A method according to claim 60 wherein reagents for said first step of said synthesis are in separate fluid communication with said first flow cell and reagents for said second step of said synthesis are in separate fluid communication with said second flow cell.

70. (Previously Presented) A method according to claim 60 further comprising exposing the

array to a sample and reading the array.

71. (Previously Presented) A method according to claim 70 comprising forwarding data comprising a result obtained from a reading of the array.

72. (Previously Presented) A method according to claim 70 comprising receiving data comprising a result of an interrogation obtained by the reading of the array.

73. (Previously Presented) A method for synthesizing an array of chemical compounds on the surface of a support, said method comprising:

- (a) contacting a surface of said support with a fluid reagent for synthesizing said chemical compounds,
- (b) placing said support in a reaction chamber and subjecting said surface to one step of said synthesis and
- (c) placing said support in another reaction chamber and subjecting said surface to another step of said synthesis wherein (a)-(c) are repeated until said array of chemical compounds is synthesized on said surface and wherein each of said reaction chambers comprises a housing with a chamber and an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is mounted wherein said support is selected from the group consisting of a strip, a plate or a flat glass.

74. (Previously Presented) A method for synthesizing an array of chemical compounds on the surface of a support, said method comprising:

- (a) contacting a surface of said support with a fluid reagent for synthesizing said chemical compounds,

(b) immersing said support in a chamber containing a monomer solution and subjecting said surface to one step of said synthesis and

(c) immersing said support in another reaction chamber containing a monomer solution and subjecting said surface to another step of said synthesis wherein (a)-(c) are repeated until said array of chemical compounds is synthesized on said surface and wherein each of said reaction chambers comprises an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is immersed wherein said support is selected from the group consisting of a strip, a plate or a flat glass.

75. (Previously Presented) A method for synthesizing an array of chemical compounds on the surface of a support, said method comprising:

(a) contacting a surface of said support with a fluid reagent for synthesizing said chemical compounds,

(b) mounting said support in a chamber of a flow cell and subjecting said surface to one step of said synthesis and

(c) mounting said support in a chamber of the same or another flow cells and subjecting said surface to another step of said synthesis wherein (a)-(c) are repeated until said array of chemical compounds is synthesized on said surface and wherein each of said flow cells comprises a housing with a chamber and an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is mounted wherein said support is selected from the group consisting of a strip, a plate or a flat glass.

76. (Previously Presented) The method of claim 73 further comprising modifying said chambers to perform multiple independent steps of said synthesis.

77. (Previously Presented) The method of claim 74 further comprising modifying said chambers to perform multiple independent steps of said synthesis.

78. (Previously Presented) The method of claim 75 further comprising modifying said chambers to perform multiple independent steps of said synthesis.

79. (New) A method for synthesizing an array of chemical compounds on the surface of a support, said method comprising:

(a) mounting said support in a chamber of a flow cell and subjecting said surface to one step of said synthesis and

(b) mounting said support in a chamber of another flow cell and subjecting said surface to another step of said synthesis wherein (a) and (b) are repeated until said array of chemical compounds is synthesized on said surface and wherein each of said flow cells comprises a housing with a chamber and an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is mounted wherein said support is selected from the group consisting of a strip, a plate or a flat glass.

80. (New) A method for synthesizing an array of biopolymers on the surface of a support wherein said synthesis comprises a plurality of monomer additions, said method comprising:

(a) placing said support into a chamber of a flow cell and subjecting said surface to a step of said synthesis that is subsequent to a monomer addition and

(b) placing said support into a chamber of another flow cell and subjecting said surface to another step of said synthesis that is subsequent to step (a) wherein said steps are repeated until said array of biopolymers is synthesized on said surface and wherein each of said flow cells

comprises a housing with a chamber and an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is placed and wherein said flow cell of (a) is dedicated to said step (a) and said flow cell of (b) is dedicated to step (b).